

ABSTRACT

A measurement system (222) for measuring the position of a stage (248) along a first axis includes a first system (260) having a first beam source (260A) that directs a first beam (260H) on a first path that is parallel with a second axis and a first redirector (260D) that redirects the first beam so that the redirected first beam (260H) is on a first redirected path that is parallel with the first axis irrespective to the orientation of the first redirector (260D) about a third axis. The measurement system (222) can include a shield (380) that protects the first beam (260H) from environmental conditions.

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